

WHAT IS CLAIMED IS:

1. A method for pre-allocating space for a file in a cluster file system, comprising:
 - a client sending a request message, wherein the request message includes
 - 5 information to create the file;
 - a server receiving the request message;
 - creating the file in the cluster file system in response to the information;
 - allocating space in a storage to the file in response to the information;
 - sending a response message, wherein the response message includes
 - 10 information indicative of the space in the storage; and
 - the client receiving the response message.
2. The method of claim 1, further comprising setting a predetermined amount of space to be allocated in response to the information.
- 15 3. The method of claim 1, further comprising performing said creating the file and said allocating space in an atomic transaction.
4. A system, comprising:
 - 20 a network;
 - one or more servers coupled to the network;
 - one or more clients coupled to the network;
 - a storage coupled to each of the one or more servers; and
 - a cluster file system including program instructions executable to implement a
 - 25 method including:
 - a client of the one or more clients sending a request message, wherein the request message includes information to create a file;

a server of the one or more servers receiving the request message, wherein the request message includes information to create the file;
creating the file in the cluster file system in response to the information;
allocating space in a storage to the file in response to the information;
5 sending a response message, wherein the response message includes information about the space in the storage; and
the client receiving the response message.

5. The system as recited in claim 4, wherein the method further includes de-allocating the
10 space in response to an amount of time transpiring after said allocating.

6. The system as recited in claim 5, wherein the method further includes setting the amount of time.

15 7. A carrier medium comprising program instructions for pre-allocating space for a file in a cluster file system, wherein the program instructions are computer-executable to implement:

a client sending a request message, wherein the request message includes information to create the file;
20 a server receiving the request message;
creating the file in the cluster file system in response to the information;
allocating space in a storage to the file in response to the information;
sending a response message, wherein the response message includes information about the space in the storage; and
25 the client receiving the response message.

8. The carrier medium of claim 7, wherein the program instructions are computer-executable to implement:

setting a predetermined amount of space to be allocated in response to the information.

9. The carrier medium of claim 7, wherein the program instructions are computer-executable to implement:

performing said creating the file and said allocating space in an atomic transaction.

10. A server system for pre-allocating space for a file in a cluster file system, the system comprising:

a CPU;

a storage coupled to the CPU; and

a memory coupled to the CPU, wherein the memory stores program instructions which are executable by the server CPU to:

receive a request message;

create the file in the cluster file system in response to the information;

allocate space in the storage to the file in response to the information; and

send a response message, wherein the response message includes information about the space in the storage.

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11. The system of claim 10, wherein the program instructions are further executable by the server CPU to:

set a predetermined amount of space to be allocated in response to the information.

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12. The system of claim 10, wherein the program instructions are further executable by the server CPU to:

perform said creating the file and said allocating space in an atomic transaction.

13. A client system for pre-allocating space for a file in a cluster file system, the system
5 comprising:

a CPU; and

a memory coupled to the CPU, wherein the memory stores program instructions
which are executable by the CPU to:

send a request message, wherein the request message includes information to
10 create the file; and
receive a response message.

14. A method for operating a file system, comprising:

the file system receiving a command to open a file, wherein a space has been
15 allocated to the file prior to said receiving, wherein the command to
open the file includes information instructing the file system to de-
allocate the space, wherein the file system is configured to
conditionally perform:

in the event a request to store data in the file is received prior to a
20 predetermined amount of time transpiring, storing said
data in the space allocated to the file; or
in the event said request is not received prior to the predetermined
amount of time transpiring, de-allocating said space.

25 15. The method of claim 14, further comprising setting the predetermined amount of
time.

16. The method of claim 14, wherein the file system is a cluster file system.

17. The method of claim 14, wherein the file system is a storage area network (SAN) file system.

5 18. A system, comprising:

a computer;

a file system including program instructions executable to implement a method including:

10 the file system receiving a command to open a file, wherein a space has been allocated to the file prior to said receiving, wherein the command to open the file includes information instructing the file system to de-allocate the space, wherein the file system is configured to conditionally perform:

15 in the event a request to store data in the file is received prior to a predetermined amount of time transpiring, storing said data in the space allocated to the file; or

in the event said request is not received prior to the predetermined amount of time transpiring, de-allocating said space.

20 19. The system as recited in claim 18, wherein the file system is a cluster file system.

20. The system as recited in claim 18, wherein the file system is a storage area network (SAN) file system.

25 21. A carrier medium comprising program instructions for operating a file system, wherein the program instructions are computer-executable to implement:

the file system receiving a command to open a file, wherein a space has been allocated to the file prior to said receiving, wherein the command to

open the file includes information instructing the file system to de-allocate the space, wherein the file system is configured to conditionally perform:

5 in the event a request to store data in the file is received prior to a
 predetermined amount of time transpiring, storing said
 data in the space allocated to the file; or
 in the event said request is not received prior to the predetermined
 amount of time transpiring, de-allocating said space.

10 22. The carrier medium of claim 21, wherein the file system is a cluster file system.

23. The carrier medium of claim 21, wherein the file system is a storage area network (SAN) file system.

15 24. A system for operating a file system, the system comprising:

 a CPU; and

 a memory coupled to the CPU, wherein the memory stores program instructions which are executable by the CPU to:

 receive a command to open a file, wherein a space has been allocated to the
20 file prior to the command to open the file, wherein the command to
 open the file includes information instructing the file system to de-allocate the space, wherein the file system is configured to conditionally perform:

 in the event a request to store data in the file is received prior to a
25 predetermined amount of time transpiring, storing said
 data in the space allocated to the file; or
 in the event said request is not received prior to the predetermined
 amount of time transpiring, de-allocating said space.

25. The system as recited in claim 24, wherein the file system is a cluster file system.
26. The system as recited in claim 24, wherein the file system is a storage area network
5 (SAN) file system.
27. A method for operating a file system, comprising:
the file system receiving a command to truncate a space allocated to a file,
wherein the space has been allocated to the file prior to said
10 receiving, wherein the command to truncate the space allocated to
the file includes information instructing the file system to de-allocate
the space, wherein the file system is configured to conditionally
perform:
in the event a request to store data in the file is received prior to a
15 predetermined amount of time transpiring, storing said
data in the space allocated to the file; or
in the event said request is not received prior to the predetermined
amount of time transpiring, de-allocating said space.
- 20 28. The method of claim 27, further comprising setting the predetermined amount of
time.
29. The method of claim 27, wherein the file system is a cluster file system.
- 25 30. The method of claim 27, wherein the file system is a storage area network (SAN) file
system.